

UNITED STATES AIR FORCE RESEARCH LABORATORY

Information Gathering for the Initial Tools Study for the Integrated Requirements Support System (IRSS)

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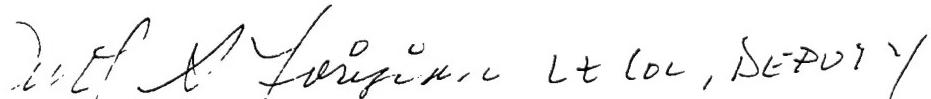
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This report has been reviewed by the Office of Public Affairs (PA) and is releasable to the National Technical Information Service (NTIS). At NTIS, it will be available to the general public, including foreign nations.

This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER



For THOMAS J. MOORE, Chief
Crew Survivability and Logistics Division
Air Force Research Laboratory

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We describe a group of related approaches to quantitative evaluations and prioritization of system requirements and proposals. In formulating requirements for new systems, analysts face difficult tasks of selecting between alternative requirement decompositions, identifying questionable or low-priority requirements, eliminating requirements that add unnecessary costs, projecting cost impact of the requirements and then evaluating alternative system design proposals against the stated requirements. We seek approaches that require modest investments of time and can be applied even at the early stages of the requirements formulation process. We show that the Analytical Hierarchy Process can be applied to provide such evaluation mechanisms and illustrate our approach with a detailed example.			
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PREFACE

This report documents the results of a comprehensive study to provide support in the creation of a core operational requirements generation and processing testbed as part of a logistics research and development program title Integrated Requirements Support System (IRSS) (Contract Number F33657-92-D-2055) managed by the Air Force Research Laboratory, Logistics Sustainment Branch (AFRL/HESS), at Wright-Patterson AFB, OH. The primary goal of the information gathering effort of this study was to provide a comprehensive review of all current ongoing efforts in the area of requirements documentation and coordination, including current methods and any automated systems under development. The results provide support in the creation of a core operational requirements generation and processing testbed, henceforth called the Core Testbed, to become a stable foundation for research and development leading to an Integrated Requirements Support System (IRSS).

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1 INTRODUCTION

1.1 BACKGROUND

The Initial Tools Study for the Integrated Requirements Support System (IRSS) subtask of SIDAC Special Project Task Number 123 is a comprehensive study to provide support in the creation of a core operational requirements generation and processing testbed, henceforth called the Core Testbed. The Core Testbed will become a stable foundation for research and development leading to an Integrated Requirements Support System (IRSS). This study will define the common functions, data, and information being used by the organizations specified in the Statement of Scope for this task, in particular, the systems currently under development by Headquarters Air Combat Command (HQ ACC), Headquarters Air Force Special Operations Command (AFSOC), Headquarters Air Education and Training Command (AETC), Headquarters Space Command (AFSPC), and the Air Force Armstrong Laboratory (AL). This study will produce information and models that support the design, planning, and development of the Core Testbed. This will serve as an effective example for implementation of integrated requirements support concepts by the Air Force. The information produced will include recommendations for software development tools, graphical user interface methods, data storage, and hardware and communications components. The study will also include a detailed implementation plan and schedule. Information Gathering is one of ten subtasks of this study.

1.2 PURPOSE

The primary goal of the information gathering effort of this study was to provide a comprehensive review of all current ongoing efforts in the area of requirements documentation and coordination, including current methods and any automated systems under development.

The information gathering activities were accomplished utilizing several methods. These activities commenced immediately following the kickoff meeting and continued through 19 June 1996. The information to be gathered was defined as the current or "as-is" state of requirements documentation development and processing and planned improvements in that area. This information included hardware and software utilized; other tools used to create, manage, communicate and coordinate operational requirements; and the methods and procedures followed by action officers performing requirements processing. The methods and procedures that were identified by the Tools Study participants as required information to be captured for the IRSS are outlined in the data call, Appendix A.

1.3 SUMMARY

The first method of information gathering was to visit requirements organizations in order to interview and gain an understanding of the procedures used by requirements action officers in their daily routines. Battelle and ARINC conducted on-site visits with most of the requirements organizations referenced in the Statement of Scope, Appendix B. Table 1, Survey Participants, shows which contractors visited which organizations. It should be noted that the IRSS Integrated Product Team (IPT) has identified other organizations that should be included in the survey exercise. Since the Information Gathering Task is completed for this phase of the study effort, these newly identified organizations will be contacted in the next phase of the study beginning 9 Aug 96.

The second method involved gathering information via electronic mail, the telephone, or again, in person. Standardized questionnaires, or data calls, were developed to ensure that accurate information is gathered in all cases. The data calls were used at the on-site visits and distributed to those organizations who were not visited by Battelle or ARINC. Table 1, Survey Participants, shows.

The third method for information gathering was groupware sessions involving organizations from the requirements community using group discussion activities in a non-attribution environment. There were three different sessions scheduled on or about the following dates: Tuesday, 7 May; Tuesday, 14 May; and Wednesday, 22 May 1996. However, it was decided by the Tools Study participants that these sessions would be a repeat of the on-site visits. Therefore, the groupware sessions were canceled until the IRSS IPT could investigate how a groupware session could be productive. The decision was made to hold a groupware session at the Tools Forum on 19 June. The session will be used to help obtain inputs for the core testbed description and to develop, in more detail, the priorities of the core functions. Results of the session added as an appendix to report.

1.4 CONCLUSIONS

The information gathered during this task shows many of similarities between the hardware and software configurations of the requirements processing organizations. These similarities can be seen in the data models and core processes of organizations that have automated procedures, in particular those that have databases. A baseline data model and set of core processes have already been initiated as part of the Three-Schema Architecture Teaming/Development Model subtask.

Table 1. Survey Participants

Organization	Survey	Notes	Location	Surveyed by
HQ AFSOC/DOXR	X		Hurlburt Field, FL	ARINC
AFOTEC	X		Albuquerque	ARINC
HQ AFSPC	X		Colorado Springs	ARINC
AIA	X		San Antonio	ARINC
HQ AMC/XPQP	X		St. Louis	ARINC
HQ ACC/DR	X		Langley AFB, VA	Battelle/Arlington
AFMC/DRX	X		Dayton	Battelle/Arlington
AFMC/STR		X	Dayton	Battelle/Arlington
HQ AFFSA/XRR	X	X	Andrews AFB	Battelle/Arlington
SAF/AQSM		X	Pentagon	Battelle/Arlington
AF/XORD	X	X	Pentagon	Battelle/Arlington
AF/LGMM		X	Pentagon	Battelle/Arlington

2 DETAILED ANALYSIS

A survey was created and distributed to the various requirements processing organizations to determine the "as-is" state of the requirements processing for those organizations. A blank copy of the survey is included in Appendix A. The organizations that participated in the data gathering process are listed in Table 1.

The data that was gathered from these organizations was in one of two forms: answers to the survey questions, or notes that were gathered during a less formally structured interviewing process. The raw data gathered from the site visits and surveys are included in Appendix C.

The survey was organized into four main sections:

1. Data
2. Software
3. Computers being used
4. Documentation, Including: Current Organizational Procedures and Future/Anticipated Requirements Needs.

The remainder of this section is an analysis of the data contained in each of the sections outlined above. The summarized data will show averages and similarities among organizations. Identification of common procedures will provide for the design of the core processes and functions of the IRSS. Similarly, identification of average software and hardware currently available and in use by the organizations will provide the baseline infrastructure for the IRSS.

2.1 DATA

The intent of the survey questions in the data section was to collect information on databases being used and user's queries of those databases. This information would help to determine the current requirements of the data needed to support requirements gathering as it stands today. Table 2 summarizes the data received from this section in the survey.

The majority of the organizations had some type of database. Of those that did have a database, all were relational, although the relational databases were used in many different ways. One was essentially flat -- with no relationships. Another used the database only to track where documents were located within their organization and maintained by one person.

The database sizes ranged from 114K to 15 MB,. The same is true for the number of tables per database with a range from 1 to 36, with no clear trend. The number of

records per table did not exceed 1724, with most under 500. When flat files were used, the typical file size was in the 10K - 1M range.

Table 2. Summary of Data Section Survey Results

DATA	
Database	0 Object Oriented
	8 Relational
	4 None
Size	Ranging from 144 K to 15 Mb, with no clear trend
Requests/Day	MNS/ORDS 3-5/Month
	APL 10-15/Month
	MODS 5-10/Month
	1/Week
	100/Day
	5/Day
# of Users	Ranging from 1 to 300, with no clear trend
UnClassified	10
Classified	6
Handling of Classified	1 by mail, 1 by stand-alone network
Current User Privileges	4 Read/Write (Admin only); Read (Users)
	3 Read/Write (all)

Currently, the typical number of users ranges from 1 to 300, with no clear trend. Several of the organizations, with the number of users in the lower range of 1 to 25, do not currently have user names and passwords for restricting privileges. In one case, the organization does not anticipate needing user privileges and passwords in the future, but in the others, the organization does anticipate needing these features.

Of the five organizations that responded to the question regarding the number of data requests, the typical number of data requests ranged from 1 a week to 100 a day. Once again, there were no clear trends. One organization anticipated that monthly data requests would exceed 2000 when their system was fully implemented.

All but one organization handles a combination of unclassified and classified data. The one exception, AIA, handles classified data exclusively. The methods of handling classified data ranged from a stand-alone network, to exclusively hardcopy documents.

2.2 SOFTWARE

The intent of the survey questions in the software section was to capture information regarding the types of software packages currently owned by the organizations, as well as identifying plans for anticipated upgrades to those packages. Table 3 summarizes the data that came from this section in the survey.

Of those organizations that responded to this question, all have Word 6.0 or newer as their primary word processing software. The same is true for Excel, with the versions ranging from 4.0 to 7.0.

Table 3. Summary of Survey Results for the Software Section

Word Processor	9 Word 6.0, 1 Word 7.0
Spreadsheet	1 Excel 4.0, 7 Excel 5.0, 1 Excel 7.0
Data Base	4 currently have or are transitioning to Access; 2 Paradox; 2 FoxPro; 1 Superbase 4
Multi-User Access	6 Yes 1 No
E-mail Connection to Internet	5 MS Mail; 1 Banyan; 1 Groupware; 1 Beyond Mail; 1 CCMail
WWW connection	8 Yes; 1 No
Browser Software	6 Netscape; 3 Mosaic; 1 GNN

With database software, there is no clear trend. Currently, six different database packages are being used. More organizations have Microsoft Access than any other, with 3 out of 10 currently using it, with another considering switching to it in the near term. Two organizations use Paradox and FoxPro. Superbase 4 and SQL Server each had one organization using them.

Other tools that were used to create, manage, communicate and coordinate operational requirements included Powerpoint (5), some form of a mail software package (3), the Internet and World Wide Web (WWW) (3), and one each of All Clear, Metrics Management, Sarah Lite, Perform Pro, and Windows for Workgroups.

Of the 7 responses to the question regarding multi-user access, all but one currently have multi-user access capabilities. The typical workstation software suite was overwhelmingly Microsoft Office.

Most of the organizations had e-mail, with Microsoft Mail being the preferred choice by 2 to 1. Most had e-mail connections to the Internet and a WWW connection. Netscape and Mosaic were the most popular WWW browsers.

With regards to future software upgrades, 5 of the 7 organizations that responded to this question said that they were considering moving to Windows NT or Windows 95 in the near term.

2.3 COMPUTERS BEING USED

The intent of the questions in the Computers Being Used section to the survey was to capture information regarding the types of hardware currently being used by the organizations, as well as identifying plans for anticipated upgrades. Table 4 summarizes the data from this section

Table 4. Summary of Survey Results for the Computers Being Used Section

Computer	PC Compatible
Processor	Median: 486
Speed	Median: 66MHz
Ram	Median: 8M
Hard Disk	Median: 240 Mb
OS	Median: Windows 3.1

The majority of the organizations have PC-compatible computers. The median computer across all organizations is the 486. At least half of the organizations have Pentiums and one organization still has 386s.

Of the 6 organizations that responded to the question regarding hard disk capacity, the answers range from 40 Mb to 1.2 GB, with no clear trend. The median RAM for each organization is 8 Mb.

The median operating system that runs on the PCs is Windows 3.1 or Windows 3.11 (Windows for Workgroups). Only one organization has Windows 95. However, referring back to the question in the Software Section regarding future software upgrades, half of the organizations will be going to Windows 95 or Windows NT in the near term.

Novell is the typical network operating system for 3 of the 5 organizations that responded to this question. Windows NT and Windows 95 are used by the other two. Everyone has a LAN/WAN connection, several have LANs specifically for classified data.

Most of the organizations have multiple buildings in the physical organization layout, with only one having a single building. Most have firewalls(physical vs. Computer) within their organization.

Plans for future hardware upgrades range from the organization of an unclassified LAN, to upgrading to all Pentiums, to increasing RAM and hard disk space on existing machines, and upgrading the backbone to a 100 Mb per sec FDDI.

2.4 DOCUMENTATION

The intent of the questions in the Documentation section was to collect information on the types of documentation that exist in the organizations. The information could be used as a reference from which more detailed functional specifications could be drawn. Table 5 summarizes the data that came from this section in the survey.

Table 5. Summary of Survey Results for the Documentation Section

Are any of your requirements processing procedures documented in a MAJCOM instruction/organization Operating Instruction (OI)?	(2) HOI 10-1; (3) 10-601; (2) YES; (1) NO
Other documentation? (Of processes, database structure, maintenance procedures, user access procedures for requirements database,...)	Of those that responded, all said NO except for one that replied PENDING.

In response to the question about whether any of the organization's requirements processing procedures are documented in a MAJCOM instruction/organization Operating Instruction (OI), 2 responded "No" and 7 responded "Yes". Of those that said "Yes", their documentation sources ranged from the governing directives and the office continuity book to the organization-specific AFI 10-601 and the HOI 10-1. When asked if any processes were documented in any other way, one organization responded that they had their own internal procedures.

No organizations had a database administrator's manual or any documentation on the structure and operations of the database. similarly, none of the organizations had any formal documented maintenance procedures that were unique to the specific software application.

Only two organizations responded to the question regarding the existence of operator's/user's manuals or documentation of user access procedures and other features of the requirements database. One had documentation pending and the other had on-the-job training and some training in Microsoft Access.

2.4.1 Current Organizational Procedures

The intent of the questions in the Current Organizational Procedures section was to collect information regarding the processes used in document requirements tracking. This information was intended to be used as a reference from which more detailed functional specifications could be drawn. Table 6 summarizes the data that came from this section in the survey.

Table 6. Organizational Procedures Survey Results Summary

Analyze, process, and track requirements.	(1) Receive, categorize, file and track via electronic database; (2) Database; (1) Word Processing, telephone, email, fax
Requirements Identification.	(1) MAA; (1) HOI Instructions; (1) MAP/USSPACE Integrated Priority List; (2) Hard Copy and Electronic

	Docs
Requirements Documentation.	(3) MNS/ORDs; (2) hard and electronic copies; (1) AF Form1067; (1) CRSD
Coordination of Requirements with AF	(1) IAW AFI 10-601; Unclassified: (2) Mail; (3) email; (3) fax; (4) hard copy Classified: (1) Mail
Requirements Prioritization.	RRB; RRG; Prioritized by developers of the requirements; AFFSA lead command for ATCALS; coordinate priorities with MAJCOM POC
Manage/Track Supporting Docs.	(1) Ad Hoc; (1) Excel; (2) DB/email/manual rcds; (1) Word; (1) Funding Profiles recorded and managed separately from DB

Four organizations responded to the question asking about the methods used to analyze, process, and track requirements. The responses that were received were too high level to be of much use. The responses included the following:

1. They are received, categorized, filed and tracked via an electronic database
2. They are controlled by HQ. This is accomplished via database, word processing, telephone, e-mail, fax, and manual processing of hard copy documents;
3. This is accomplished via a Database
4. This is accomplished via word processing, e-mail, and manual processing of hard copy. (use periods instead of semicolons)

In response to how their organization accomplishes requirements identification, the following answers were given:

1. Through the MAA
2. Through a MAP/USSPACE Integrated Priority List
3. Through HOI Instructions
4. Through Hard copy and electronic documents; and
5. Through word processing and manual files.

In response to how their organizations accomplish requirements documentation, most of those organizations responded that they are using formal documents such as MNS/ORDS, CSRDs, and AF Form 1067. Others didn't specify particular documents but rather said that they were using hard copy and electronic copies.

When asked how their organizations accomplish coordination of requirements with the Air Force, the organizations interpreted the question in various ways. Some responded by saying they are using hard copy and electronic versions; others are using mail, e-mail, telephone, and fax, and other specified specific documents such as the 10-601.

In response to how their organizations accomplish requirements prioritization, the organizations responded with the following answers:

1. Done during the quarterly Requirements Review Board (RRB) and reviewed by AFSOC Council
2. RRB and RRG
3. Prioritized by developers of the requirement
4. AFFSA lead command for ATCALS; coordinate priorities with MAJCOM POC.

When asked to how their organizations manage and track supporting documents, the organizations responded with the following answers:

1. Funding profiles are recorded on the fact sheets but are managed by my office.
The rest of the information is managed in the database by the AO
2. Excel
3. DR Database, also in-house DB and Requirements Documents
4. Ad Hoc; No set process
5. Database, e-mail, and manual records
6. Stored as Word Document on PC

When asked to how their organization's general capabilities are, the organizations responded with the following answers:

1. Done in the MAA/MAP
2. Air Mobility Master Plan.

When asked to how what their organization's general deficiencies are, the organizations responded with the following answers:

1. No formal data to track deficiencies;
2. Air Mobility Master Plan;
3. Lack of up-to-date computer hardware, inadequate data storage capability and lack of up-to-date communications tools;
4. Data sharing between offices and lack of fields like MAJCOM; and
5. Need a way to more rapidly sort documents coming to them for review. An ability to scan documents looking for key words. The ability to score the keywords, based on the number of times the word appears in a document. Concerned with how to deal with organizations which work off a classified LAN, in terms of interfacing them with outside agencies dealing with unclassified documents.

When asked to what queries and reports are currently available to them, the organizations responded with the following answers:

1. Documentation reviews;
2. Program info is available in DR Database;
3. Total documents processed during a given time period; and
4. ATCALS Database published in October.

Three of the organizations responded that they were aware of AF-wide requirements processing automation initiatives. When asked if their procedures were compatible, all answered that they did not know because they were unaware of the anticipated capabilities of the automation initiatives.

When asked to who the organization's customers are, the organizations responded with the following answers:

1. AFSOC-gained units;
2. The entire AF community and joint programs;
3. AF AFSPC/OU, Wings;
4. Other HQ AMC directories, various action officers and reserve forces;
5. All MAJCOMS, Product Centers, Air Logistics Centers and HQ AFMC offices; and
6. Pilots, Air Traffic Controllers, FAA personnel, and Acquisition personnel as ESC/TG.

When asked to what products the organization's have to deliver, the organizations responded with the following answers:

1. MNS, ORD, C-MNS and supporting staff documentation;
2. Comments;
3. MNS/ORDS;
4. APL and MOD summaries
5. Document review, comments, and coordination. Document distribution. Procedural and Policy guidance; and
6. MNS, ORD, MAA, AOA, COEAs, Site surveys, and ATC faculty distance.

When asked to the how the organizations distribute appropriate requirements data to customers, the organizations responded with the following answers:

1. Handled by AO, preferably via electronic means (computer);
2. Hard copy; some electronic;
3. Respond to Ad Hoc requests; and
4. Mail and e-mail.

2.4.2 Future/Anticipated Requirements Needs

When asked about the present challenges to producing/distributing the organization's deliverables, the organizations responded with the following answers:

1. Manpower restrictions that limit our capability to take a document from concept to completion organically;
2. All are major factors in developing deficiencies in solutions. Management of resources to meet an extended time line is key factor;
3. All current challenges due to lack of communications between action officers and inadequate data linkage to cost, scheduling, and performance actions;
4. All current challenges due to a lack of up-to-date hardware/software and communications tools, as well as a lack of manpower;

5. The ability to see deficiencies without technologies, identify deficiencies that are in trouble if technology is pulled and what happens if a concept is killed; and
6. Many of the challenges are due to the lack of understanding concerning the requirements by various review offices that are involved in the MNS/ORD process.

When asked to what experience the people performing the requirements processing tasks need, the organizations responded with the following answers:

1. A minimal amount of hands-on time using the database and a working knowledge of AF staff procedures;
2. Test Manager experience;
3. AFSPC provides a training program to include S4/S111, command management seminar, etc. to give basic information;
4. We have experience levels ranging from virtually none to extensive, obviously the more the better;
5. A knowledge of current processes, existing requirements guidance, and understanding of organizational functions and interrelationships as well as a familiarity with computer hardware/software tools and a good set of communications tools.

When asked to what are the estimated resources required to complete these tasks (in terms of processing a single "average" requirement) the organizations responded with the following answers:

1. A flexible database and the computers to host it, and the time and patience to use it
2. End-to-end process involving multiple 2 layer organization.

When asked to the question regarding whether their organizations have any plans in the near future to change their current requirements management processes or the products they deliver, the organizations responded with the following answers:

1. Some acquisition reform measures have the potential for reducing our workload within the AF system, the SOF system has no reform on the horizon;
2. No (2);
3. Totally flow chart processes to show input, output, supplier, customer, and internal process actions; automate as best we can;
4. The systems requirement division is reorganizing to address new and maturing acquisitions, as well as deficiencies in training and quality processes;
5. Any major changes within HQ AFMC will be driven by HQ USAF/XORD initiatives.

It is more difficult to analyze and compare responses to free form questions, such as the ones in the Organization Procedures Section of the survey. Since the intent of this section was to identify functionality of a future software application that could do requirements tracking, the responses could be used to capture what is currently being done and what

they would like to see done. The following list contains a set of system requirements as a result of the comments from this survey section. This list needs to be prioritized and classified according to urgency of need.

1. Receive, categorize, file, and track requirements via a database;
2. Coordinate data sharing with other AF organizations (email, fax, mail,etc.);
3. Add MAJCOM fields;
4. Prioritize Requirements;
5. Have funding management;
6. Rapidly sort documents for review;
7. Scan documents looking for keywords and "score" the keywords, based on the number of times the word appears in a document;
8. Create deliverables (MNS, ORD, C-MNS, APL, MOD summaries) in hard and electronic copy;
9. Have the ability to manage documents;
10. Add/improve data linkages to cost, scheduling, and performance actions;
11. Have the ability to see deficiencies without technologies (i.e. identify deficiencies that are in trouble if technology is pulled).

3 SUMMARY AND REFERENCES

3.1 SUMMARY

Battelle and ARINC conducted on-site visits with most of the requirements organizations referenced in the Statement of Scope, Appendix B. Standardized survey questionnaires, or data calls, were developed to ensure that accurate information was gathered in all cases and also distributed to organizations that were not visited. A groupware session was held at the Tools Study Forum on 19 June. This session was used to help obtain inputs for the core testbed description and to develop, in more detail, the priorities of the core functions. Since this report was due on 19 June, the results of the groupware session added to this report in the form of an appendix.

Common procedures of the requirements processing organizations will provide for the design of the core processes and functions of the IRSS. Average software and hardware currently available and in use by the organizations will provide the baseline infrastructure for the IRSS.

The information gathered during this task shows many similarities among the requirements processing organizations. A baseline data model and set of core processes have already been initiated as part of the Three-Schema Architecture Teaming/Development Model subtask.

3.2 REFERENCES

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4 APPENDIXES

4.1 APPENDIX A: QUESTIONNAIRES

"As-Is" State of Requirements Processing Data Call

Organization:

Location:

Point of Contact:

E-mail address:

Phone number:

Fax number:

Date:

1. Data

- Are you using a database?
- If yes, what type (relational, object-oriented, etc.)?
- If you do not use a database, how do you store the data for tracking requirements etc.?
- Amount of data
 - If using a database, what is the size of the database in bytes?
 - How many tables are there?
 - How many records in each table?
 - If not using a database, what is the size of files in bytes?
- How many requests for information from the requirements data are there per day?
- How many users of the data?
- How many requests from users to include additional information in the data per month?
- Types of data and data relationships (perhaps a table layout or diagram). Please attach.
- Classified and/or unclassified data?
- What type of user privileges are you currently using (user names, passwords, levels for creating, reading, editing, deleting)?
- What type of user privileges do you need?

2. Software

- If you use a word processor for any of the requirements processes, which one (Word, WordPerfect, etc.)? What version/release?
- If you use a spreadsheet, which one (Excel, Lotus, etc.)? What version/release?
- If you use database management software, which one (Access, FoxPro, SQL Server, etc.)? What version/release?
- What other software tools do you use to create, manage, communicate and coordinate operational requirements?
- Does your software allow for multi-user or single-user access?
- What is your **typical** computer workstation **software** suite?
- What e-mail system do you use? Does it connect to the Internet?
- Can you connect to the World Wide Web? What Internet browser do you use (version/release)?
- Do you plan any software upgrades in the next 6, 12, 18 months? What are they?

3. Computers being used:

- IBM-compatible PCs, Macintosh, Suns?

- Hardware specifications (processor, speed, RAM, disk space, etc.) for your “high-end”, “low-end”, and “typical” PC/workstation?
- Operating system - Windows 3.1, Windows NT, Windows 95, Unix (version?)?
- Are you connected to a LAN/WAN?
- Server type and capacity
- Communications
- What is the physical layout of your organization? (e.g. Is your organization spread out over two buildings?)
- Do you have firewalls?
- Do you plan any hardware upgrades in the next 6, 12, 18 months? What are they?

4. Documentation

- Are any of your requirements processing procedures documented in a MAJCOM instruction/organization Operating Instruction (OI)?
- Are any processes documented in another manner?
- If you are using a database, is there a database administrator’s manual or any documentation on the structure and operations of the database?
- Are there maintenance procedures that are unique to the specific software application? Are these procedures documented in any way?
- Is there an operator’s/user’s manual or any documentation of user access procedures and other features of the requirements database? (e.g., queries or searches for information, entering new data, modifying data)

5. Other: (Including Current Organizational Procedures and Future/Anticipated Requirements Needs)

Briefly describe how your organization accomplishes the following processes:

- Analyze, process, and track requirements
- Requirements identification
- Requirements documentation
- Coordination of requirements (classified and unclassified) with the Air Force
- Requirements prioritization
- Manage/track supporting documents (e.g., Mission Need Statements or Operational Requirements Documents), funding profiles, point of contact information, and background information.
- Define general capabilities and deficiencies
- Associate rationales with requirements
- What queries and/or reports are currently generated by/available to your organization?
- Are you aware of any Air Force-wide requirements processing automation initiatives?
- If yes, are your procedures compatible with emerging Air Force automation initiatives for the management and analysis of the requirements processes?

- Who are your customers?
- What are the products you have to deliver?
- How do you distribute appropriate requirements data to customers?

- What are your present challenges to producing/distributing your deliverables in terms of:
 - product completion
 - time schedule
 - quality expectations
 - budget
- What experience do the people performing requirements processing tasks need?
- What are the estimated resources required to complete these tasks (in terms of processing a single “average” requirement)?
 - cost
 - material, equipment, postage, etc.
 - hours
- Does your organization have any plans in the near future (to include any MAJCOM initiative which would effect your organization) to change your current requirements management processes or the products you deliver? If yes, please provide a synopsis of the key points (e.g., contracting out, upgrading equipment, upgrading software, etc.)

4.2 APPENDIX B: STATEMENT OF SCOPE FOR THE INITIAL TOOLS STUDY FOR A REQUIREMENTS TESTBED

1. PURPOSE

This Statement of Scope, when approved by AL/HRGA, will serve as a limit on the organizations and products that will be included in this study. Once this Statement of Scope is approved, no further changes to the organizations and/or products will be accepted without extending the period of performance and delivery dates of all deliverables that have not been submitted.

2. SCOPE

2.1 Core Organizations

The following organizations will comprise the core of the Tools Study. These organizations will be included in all aspects of the study, including the data call, groupware sessions, and information gathering visits.

HQ ACC/DRM	Langley AFB, VA
HQ AETC/XORP	Randolph AFB, TX
HQ AFFSA	Andrews AFB, MD
HQ AFMC/DR	Wright-Patterson AFB, OH
HQ AFOTEC/XR	Kirtland AFB, NM
HQ AFSOC/DO	Hurlburt Field, FL
HQ AFSPC/DRR	Peterson AFB, CO
HQ AIA	Kelly AFB, TX
HQ AMC/XP	Scott AFB, IL
HQ OSAF/AQ	Washington, DC
HQ USAF/C4A	Scott AFB, IL
HQ USAF/SPO	Washington, DC

Information only:

HQ USAF/XORD	Washington, DC
OL AL HSC/HRG	Wright-Patterson AFB, OH

2.2 Satellite Organizations

The following organizations will be satellite organizations of the Tools Study. These organizations will be included in selected aspects of the study, including some, but not necessarily all, of the data call, groupware sessions, and information gathering visits.

HQ USAF/CEP
HQ USAF/INX
HQ USAF/LGMY
HQ USAF/PER
HQ USAF/PES
HQ USAF/REO
HQ USAF/SCXP
HQ USAF/XOW
HQ ANG/AQ

2.3 Core Products

The following products currently under development or completed by USAF organizations and/or contractors, and commercial-off-the-shelf products will be included in the Tools Study.

I-MPP	ACC/DRM (Battelle Arlington)
	AFSOC/DO & AETC/XO (ARINC)
RAPID-WS	AL/HRG (Sumaria Systems)

2.4 Satellite Products

The following products will be included in the Tools Study as time and resources permit.

Vitech Corporation's CORE
Zycad Corporation's DOORS
Ascent Logic Corporation's RDD-100
Marconi Systems Technology, Inc.'s RTM
TD Technologies' SLATE
Other products that become available

4.3 APPENDIX C: DATA TABLES

DATA SUMMARY

	Database Type	Database Size	Number of tables	Records per Table	Flat File Size	Types of Data Relationships
AFSOC/DOXR	Relational	1.5 MB	9	200	X	X
AFOTEC	NONE	N/A	N/A	N/A	10K - 1M	X
AFSPC	Relational	1.8 MB	X	X	X	X
AIA	Relational	15 MB	5	460	10K -1M	X
AMC	None	N/A	N/A	N/A	150 - 311 Kb	X
HQ ACC/DR	Relational	4 Mb	36	0 - 1000+	N/A	X
AFMC/DRX	Relational	114 K	1	240	N/A	Received
AFMC/STR	Relational	X	3	X	N/A	X
HQ AFFSA/XRR	None	N/A	N/A	N/A	Yes: X	X
SAF/AQSM	None	N/A	N/A	N/A	Yes: X	
AF/XOR	Relational (Flat)	9 Mb	2	Main: 1724 PMD: 487	N/A	
AF/LGMM	Yes: Only to track where documents are within LGM; kept by LGM exec	X	X	X	N/A	X

X denotes information not provided

DATA SUMMARY

	Number of Users	User Privileges
AFSOC/DOXR	25	<p><i>Current:</i> Passwords</p> <p><i>Anticipated:</i> X</p>
AFOTEC	X	<p><i>Current:</i> None</p> <p><i>Anticipated:</i> Passwords</p>
AFSPC	125	<p><i>Current:</i> User Names, Passwords, All with Read/Write</p> <p><i>Anticipated:</i> Administrator - all privileges, Others - Read Only</p>
AIA	2	<p><i>Current:</i> Editing for two users</p> <p><i>Anticipated:</i> Passwords</p>
AMC	Regular: 60 Ad Hoc: 20 - 30	<p><i>Current:</i> LAN Action Officers: Administrative LAN Users: Read Only</p> <p><i>Anticipated:</i> Read, Write, Create, Delete, and Edit</p>
HQ ACC/DR	300	<p><i>Current:</i> User Names and Passwords Application manager: varying levels of access for read, write, view, and edit Requirements Part of Database: Action Officer can edit their own documents and browse all DB Administrator can edit all Heads of organizations can edit all within their organization and browse all</p> <p><i>Anticipated:</i> Same as above</p>
AFMC/DRX	1	<p><i>Current:</i> One user</p> <p><i>Anticipated:</i> Same</p>
AFMC/STR	X	<p><i>Current:</i> X</p> <p><i>Anticipated:</i> X</p>
HQ AFFSA/XRR	X	<p><i>Current:</i> X</p> <p><i>Anticipated:</i> X</p>
SAF/AQSM	X	<p><i>Current:</i> X</p> <p><i>Anticipated:</i> X</p>
AF/XOR	Continuous: 2 Periodically: 3 Multiple Walk-ins	<p><i>Current:</i> Multilevel users: Read Only and Read/Write</p> <p><i>Anticipated:</i> Same as above</p>
AF/LGMM	X	<p><i>Current:</i> X</p> <p><i>Anticipated:</i> X</p>

X denotes information not provided

DATA SUMMARY

	Unclassified Data	Classified Data
AFSOC/DOXR	Yes	No
AFOTEC	Yes	Yes
AFSPC	Yes	No
AIA	No	Yes
AMC	Yes	No
HQ ACC/DR	Yes	Yes - Handled by Stand Alone network
AFMC/DRX	Yes	Yes - Handled by Hardcopy
AFMC/STR	X	X
HQ AFFSA/ XRR	Yes	No
SAF/AQSM	80%	20%
AF/XOR	Yes	No
AF/LGMM	95%	5%

X denotes information not provided

DATA SUMMARY

	Data Requests	Requests for Additional Information
AFSOC/DOXR	<i>Daily:</i> X	
	<i>Weekly:</i> X	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
AFOTEC	<i>Daily:</i> X	
	<i>Weekly:</i> 1	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
AFSPC	<i>Daily:</i> Unavailable On-line	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
AIA	<i>Daily:</i> X	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
AMC	<i>Daily:</i> APL: 5 at Peak	<i>Daily:</i> X
	<i>Monthly:</i> APL: 10 -15 MODs: 5 -10, MNS-ORDs: 3 - 5	<i>Monthly</i> X
HQ ACC/DR	<i>Daily:</i> 5 (under final testing) 100 when fully implemented	<i>Daily:</i> X
	<i>Monthly:</i>	<i>Monthly:</i> : Anticipate over 2000 when fully implemented
AFMC/DRX	<i>Daily:</i> 2	<i>Daily:</i> X
	<i>Monthly:</i> 1	<i>Monthly:</i> X
AFMC/STR	<i>Daily:</i> X	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
HQ AFFSA/ XRR	<i>Daily:</i> X	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
SAF/AQSM	<i>Daily:</i> X	<i>Daily:</i> X
	<i>Monthly:</i> X	<i>Monthly:</i> X
AF/XOR	<i>Daily:</i> 100	<i>Daily:</i> Not Sure
	<i>Monthly:</i>	<i>Monthly:</i> X
AF/LGMM	<i>Daily:</i>	<i>Daily:</i> X
	<i>Monthly:</i>	<i>Monthly:</i> X

X denotes information not provided

SOFTWARE DATA

	Word Processor	Spreadsheet	Database
AFSOC/DOXR	Word 6.0	Excel 4.0	FileMaker Pro 2.1 Transitioning to Access
AFOTEC	Word 6.0	Excel 5.0	Access
AFSPC	Word 6.0	Excel 5.0	Access 2.0
AIA	Word 6.0	Excel 5.0	Paradox
AMC	Word 6.0	Excel 5.0	None
HQ ACC/DR	Word 6.0 Word 7.0	Excel 5.0 Excel 7.0	FoxPro MS Access SQL Server
AFMC/DRX	Word 6.0	N/A	Superbase 4 v1.21
AFMC/STR	X	X	FoxPro 2.6
HQ AFFSA/ XRR	Word 6.0	Excel 5.0	X
SAF/AQSM	X	X	X
AF/XOR	Word 6.0	Excel 5.0	Paradox 1.0
AF/LGMM	X	X	X

X denotes information not provided

SOFTWARE DATA

	Other software tools used to create, manage, communicate and coordinate operational requirements
AFSOC/DOXR	Powerpoint CC:Mail Internet
AFOTEC	MS Mail 3.5 NCSA Mosaic
AFSPC	All Clear Metrics Management Sarah Lite Perform Pro Windows for Workgroups
AIA	WWW software
AMC	Powerpoint
HQ ACC/DR	E-mail
AFMC/DRX	Powerpoint 4.0 Beyond Mail v2.0
AFMC/STR	X
HQ AFFSA/ XRR	X
SAF/AQSM	X
AF/XOR	Powerpoint 4.0a
AF/LGMM	X

X denotes information not provided

SOFTWARE DATA

	MultiUser Access	Typical Workstation Software Suite	Plans for Operating System Upgrade
AFSOC/DOXR	Yes	MS Office LAN applications	X
AFOTEC		DOS 5.0 Powerpoint Word Excel Formflow Windows 3.11 Mosaic	X
AFSPC	Yes	Windows for Workgroups 3.11	X
AIA	No	MS Office	X
AMC	Yes	MS Office	X
HQ ACC/DR	Yes	Windows 95	X
AFMC/DRX	Yes	Word 6.0 Powerpoint 4.0 Excel 5.0 Beyond Mail 2.0 Paradox 4.5 Superbase 4 1.21 Netscape 2.0	X
AFMC/STR	X	FoxPro 2.6	X
HQ AFFSA/ XRR	X	DeskTop IV GTSI	X
SAF/AQSM	X	X	No
AF/XOR	Yes	MS Office 4.2	X
AF/LGMM	X	X	X

X denotes information not provided

EMAIL SUMMARY

	Software	Email Connection to Internet	WWW Connection
AFCSOC/DOXR	CC:Mail	Yes	Yes
AFOTEC	MS Mail 3.5	Yes	Yes
AFSPC	MS Mail	Yes	Yes
AIA	Banyan	Yes	No
AMC	Novell Groupwise 4.1	Yes	Yes
HQ ACC/DR	Microsoft Exchange	Yes	Yes
AFMC/DRX	Beyond Mail 2.0	Yes	Yes
AFMC/STR	X	X	X
HQ AFFSA/ XRR	Windows 3.1	Yes	Yes
SAF/AQSM	X	X	X
AF/XOR	MS Mail	Yes	Yes
AF/LGMM	MS Mail	Yes	Yes

X denotes information not provided

INTERNET SUMMARY

	Browser Software	Future Software Upgrades
AFSOC/DOXR	Netscape	Yes. TBD
AFOTEC	Mosaic 2.0	6 mos: MS Exchange 12 mos: Windows NT
AFSPC	GNN (beta)	E-mail: Looking at MS Exchange Evaluating Windows NT (but will not be supported base wide)
AIA	X	X
AMC	Netscape 1.1	Windows 95 (9 months out)
HQ ACC/DR	Mosaic 2.0	In the process of implementing I-MPP, moving to MS Web server browser, and windows 95 office suite of applications
AFMC/DRX	Netscape 2.0	X
AFMC/STR	X	X
HQ AFFSA/ XRR	NCSA Mosaic	Dependent on Base Program
SAF/AQSM	X	X
AF/XOR	Netscape	Unclassified LAN installation with NT O/S and Windows 95
AF/LGMM	Netscape	X
	Mosaic	

X denotes information not provided

HARDWARE SUMMARY

	COMPUTER	PROCESSOR	MHz
AFSOC/DOX R	IBM compatible PCs		
		<i>High:</i> Pentium	<i>High:</i> 166
		<i>Low:</i> 386	<i>Low:</i> 25
		<i>Typical:</i> 486	<i>Typical:</i> 50
AFOTEC	IBM Compatible PC		
		<i>High:</i>	<i>High:</i>
		<i>Low:</i>	<i>Low:</i>
		<i>Typical:</i> 486	<i>Typical:</i> 33
AFSPC	IBM Compatible PC		
		<i>High:</i> Pentium	<i>High:</i> 133
		<i>Low:</i> 486	<i>Low:</i> 66
		<i>Typical:</i> 486	<i>Typical:</i> 66
AIA	Zenith		
		<i>High:</i>	<i>High:</i>
		<i>Low:</i>	<i>Low:</i>
		<i>Typical:</i> 486	<i>Typical:</i> 33
AMC	IBM Compatible PC		
		<i>High:</i>	<i>High:</i>
		<i>Low:</i>	<i>Low:</i>
		<i>Typical:</i> Pentium 486DX	<i>Typical:</i> 66
HQ ACC/DR	IBM Compatible PC		
		<i>High:</i> Pentium	<i>High:</i>
		<i>Low:</i> 486	<i>Low:</i> 33
		<i>Typical:</i> 486	<i>Typical:</i> 66
AFMC/DRX	Wang		
		<i>High:</i>	<i>High:</i>
		<i>Low:</i>	<i>Low:</i>
		<i>Typical:</i> 486	<i>Typical:</i> 25

X denotes information not provided

HARDWARE SUMMARY

	COMPUTER	PROCESSOR	MHz
AFMC/STR	IBM Compatible PC MACs	<i>High:</i> Pentium <i>Low:</i> 486 <i>Typical:</i> 486	<i>High:</i> 120 <i>Low:</i> 33 <i>Typical:</i> 33
HQ AFFSA/ XRR	IBM Compatible PC	<i>High:</i> <i>Low:</i> <i>Typical:</i> 486	<i>High:</i> <i>Low:</i> <i>Typical:</i> 33
SAF/AQSM	IBM Compatible PC	<i>High:</i> Pentium <i>Low:</i> 486 <i>Typical:</i> 486	<i>High:</i> <i>Low:</i> <i>Typical:</i> X
AF/XOR	IBM Compatible PC	<i>High:</i> Pentium <i>Low:</i> 486 <i>Typical:</i> 486	<i>High:</i> 100 <i>Low:</i> 33 <i>Typical:</i> 33-100
AF/LGMM	X		

X denotes information not provided

HARDWARE SUMMARY

	Hard Disk Capacity	RAM
AFSOC/DOXR	200-500 MB; 1 GB	
		<i>High:</i> 16 - 32 MB
		<i>Low:</i> 4 - 8 MB
		<i>Typical:</i> 8 - 16 MB
AFOTEC	240 Mb	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 8 M
AFSPC	X	
		<i>High:</i> 8 Mb
		<i>Low:</i> 4 Mb
		<i>Typical:</i> 8-12 Mb
AIA	400 Mb	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 8 Mb
AMC	1.2 Gb and 420 Mb	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 16 Mb
HQ ACC/DR	X	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 8 Mb
AFMC/DRX	40 Mb	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 8 Mb

X denotes information not provided

HARDWARE SUMMARY

	Hard Disk Capacity	RAM
AFMC/STR	40 Mb	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 8 Mb
HQ AFFSA/ XRR	X	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> 8 Mb
SAF/AQSM	X	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> X
AF/XOR	X	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical:</i> X
AF/LGMM	X	
		<i>High:</i>
		<i>Low:</i>
		<i>Typical</i>

X denotes information not provided

HARDWARE SUMMARY

	Operating System (Desk Top)	Operating System (Network)	LAN/WAN Connection	Server
AFSOC/DOXR	Windows (95%); Windows 95 (4%); Macintosh (1%)	Novell 4.1	Yes	Current: Compaq Proliant 4500 Server Planned: X
AFOTEC	Windows 3.1	X	Yes	Current: Pentium Planned: X
AFSPC	Windows for Workgroups 3.11	Windows NT	Yes	Current: Compaq and Dell Planned: X
AIA	Window 3.1	X	Yes	Current: Pentium Planned: X
AMC	MS Dos 6.22 Windows 3.1	Novell 4.1	Yes	Current: Pentium 166 with 640 Mb RAM utilizing Novell 3.2 Planned: Upgrade to Novell 4.1 OS
HQ ACC/DR	Windows 95	NT Novell	Yes	Current: NT Novell servers (11 Gb) Planned: X
AFMC/DRX	Windows 3.1	X	Yes	Current: 486- 6 Planned: Pentium
AFMC/STR	X	Novel	Yes	X
HQ AFFSA/ XRR	Windows NT	X	Yes	Current: Same as 89th Air Lift Wing Planned: X
SAF/AQSM	Windows for Workgroups	X	Closed Classified 3 Stand Alone	Current: X Planned: X
AF/XOR	Classified Windows 3.11 in Novell 4.1	Unclassified: within 6 mos. Windows 95 and NT	Yes Classified	Current: Single workstation on Internet with Endora mail Planned: X
AF/LGMM	Windows 3.1	X	X	X

X denotes information not provided

HARDWARE SUMMARY

	Physical Organization Layout	Firewalls	Hardware Upgrade Planned
AFSOC/DORX	One primary building. About 4 small organizations dial-in to LAN or have TI connections	We have various security measures	Upgrade backbone to 100Mbit per sec FDDI
AFOTEC	Multiple buildings	Yes	6 mos 16 Mb RAM 12 mos Larger hard drives 18 mos Pentium upgrade
AFSPC	Multiple local buildings, also a remote site -- all connected to LAN	Yes	Upgrades evaluated as migration plan
AIA	X	X	X
AMC	Multiple buildings	Yes	No
HQ ACC/DR	Multiple buildings 4 on-base and off-base site	Yes	No
AFMC/DRX	Multiple buildings	Yes	LAN and Server
AFMC/STR	X	X	All Pentiums/120
HQ AFFSA/XRR	Single building	X	X
SAF/AQSM	X	X	X
AF/XOR	Pentagon with swing sites	Unknown	Installation of Unclassified LAN
AF/LGMM	X	X	X

X denotes information not provided

DOCUMENTATION SUMMARY

	Are any of your requirements processing procedures documented in a MAJCOM instruction/organization Operating Instruction (OI)?
AFSOC/DORX	Yes in the governing directives ant the office continuity book
AFOTEC	No.
AFSPC	AFSAC HOI 10-1
AIA	Yes
AMC	Yes. HOI
HQ ACC/DR	Yes, ACCI 10-601
AFMC/DRX	No. Too long to develop
AFMC/STR	X
HQ AFFSA/ XRR	Yes, AFFOI
SAF/AQSM	X
AF/XOR	Yes. AFI 10-601
AF/LGMM	AFI 10-601

X denotes information not provided

	Are any processes documented in another way?
AFSOC/DORX	X
AFOTEC	No
AFSPC	No
AIA	X
AMC	No
HQ ACC/DR	No
AFMC/DRX	Internal DRX procedures
AFMC/STR	X
HQ AFFSA/ XRR	AFI 10-601
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

DOCUMENTATION SUMMARY

	If using a database, is there a database administrator's manual or any documentation on the structure and operations of the database?
AFSOC/DORX	X
AFOTEC	No
AFSPC	No
AIA	X
AMC	No
HQ ACC/DR	Pending
AFMC/DRX	No
AFMC/STR	No
HQ AFFSA/ XRR	N/A
SAF/AQSM	No
AF/XOR	No
AF/LGMM	No

X denotes information not provided

	Are there maintenance procedures that are unique to the specific software application? Are these procedures documented in any way?
AFSOC/DORX	X
AFOTEC	No
AFSPC	No
AIA	X
AMC	N/A
HQ ACC/DR	No
AFMC/DRX	Yes, but not documented
AFMC/STR	X
HQ AFFSA/ XRR	No
SAF/AQSM	X
AF/XOR	No
AF/LGMM	X

X denotes information not provided

DOCUMENTATION SUMMARY

	Is there an operator's/user's manual or any documentation of user access procedures and other features of the requirements database? (e.g., queries or searches for information, entering new data, modifying data)
AFSOC/DORX	X
AFOTEC	No
AFSPC	Basic OJT and training in Access 2.0; Some written doc.
AIA	X
AMC	X
HQ ACC/DR	Pending
AFMC/DRX	Due to Access User friendliness little or no documentation
AFMC/STR	X
HQ AFFSA/ XRR	X
SAF/AQSM	X
AF/XOR	No
AF/LGMM	No

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

Analyze, process, and track requirement	
AFSOC/DORX	They are received, categorized, filed and tracked via an electronic database
AFOTEC	N/A
AFSPC	DR Database
AIA	N/A
AMC	HOI Instructions
HQ ACC/DR	X
AFMC/DRX	Controlled by HQ AFMC/DRX. Accomplished via database, word processing, telephone, e-mail, fax, and manual processing of hard copy documents
AFMC/STR	X
HQ AFFSA/ XRR	Done via word processing and manual files (paper); email with XORD
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

Requirements Identification	
AFSOC/DORX	Identified primarily in the MAA
AFOTEC	N/A
AFSPC	MAP/ USSPACE Integrated Priority List
AIA	N/A
AMC	Draft needs statement
HQ ACC/DR	X
AFMC/DRX	Hard copy and electronic documents
AFMC/STR	X
HQ AFFSA/ XRR	Done via word processing and manual files (paper); email with XORD
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

Requirements Documentation	
AFSOC/DORX	Mission Needs Statement (MNS), AF Form 1067, Operational Requirements Document (ORD), ORD Addendum, and CSRDs
AFOTEC	N/A
AFSPC	MNS/ORD's (in MS Word)
AIA	N/A
AMC	MNS and ORDS
HQ ACC/DR	X
AFMC/DRX	Hard copy and electronic copies.
AFMC/STR	X
HQ AFFSA/ XRR	Accomplished via word processing and manual files (paper); email with XORD
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

Coordination of Requirements with Air Force	
AFSOC/DORX	IAW AFI 10-601
AFOTEC	Classified : Mail, and Unclassified: E-mail, snail mail, and fax
AFSPC	Paper Copy (some electronic)
AIA	X
AMC	Regular Mail, occasional e-mail, and hard copies
HQ ACC/DR	X
AFMC/DRX	E-mail, telephone, fax, and hard copy.
AFMC/STR	X
HQ AFFSA/ XRR	IAW AFI 10-601
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

Requirements Prioritization	
AFSOC/DORX	Done during the quarterly Requirements Review Board (RRB), reviewed by AFSOC Council
AFOTEC	N/A
AFSPC	X
AIA	X
AMC	RRB and RRG
HQ ACC/DR	X
AFMC/DRX	Prioritized by developers of the requirement
AFMC/STR	X
HQ AFFSA/ XRR	AFFSA lead command for ATCAL; coordinate priorities with MAJCOM P.O.C
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

Managing Supporting Document	
AFSOC/DORX	Funding profiles are recorded on the fact sheets but are managed by my office. The rest of the information is managed in the database by the AO.
AFOTEC	Excel to track documents
AFSPC	DR Database, also in-house DB and Req. Docs.
AIA	X
AMC	Ad Hoc: No Set process
HQ ACC/DR	X
AFMC/DRX	Database, email, and manual records
AFMC/STR	X
HQ AFFSA/ XRR	Stored as Word Document on PC (486)
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	Defining General Capabilities
AFSOC/DORX	Done in the MAA/MAP
AFOTEC	X
AFSPC	No formal data to track deficiencies
AIA	X
AMC	Air Mobility Master Plan
HQ ACC/DR	X
AFMC/DRX	Ability to process data electronically and manually
AFMC/STR	Data sharing between offices and lack of fields like MAJCOM
HQ AFFSA/ XRR	X
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

Defining General Deficiencies	
AFSOC/DORX	Done in the MAA/MAP
AFOTEC	X
AFSPC	MAP
AIA	X
AMC	Air Mobility Master Plan
HQ ACC/DR	X
AFMC/DRX	Lack of up-to-date computer hardware, inadequate data storage capability and lack of up-to-date communications tools.
AFMC/STR	Data sharing between offices and lack of fields like MAJCOM
HQ AFFSA/ XRR	X
SAF/AQSM	<p>They need a way to more rapidly sort documents coming to them for review. An ability to scan documents looking for key words would be a major aid for them, particularly if they could "score" the keywords, based on the number of times the word appears in a document.</p> <p>Concerned with how to deal with organizations which work off a classified LAN, in terms of interfacing them with outside agencies dealing with unclassified documents.</p>
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

Current Queries & Reports available to your organization	
AFSOC/DORX	X
AFOTEC	Documentation reviews
AFSPC	Program info is available in DR Database
AIA	X
AMC	Acquisition priority list, MOD summaries, P3 funding data provided by AF/LGSY
HQ ACC/DR	X
AFMC/DRX	1) Total documents processed during a given time period. 2) Documents completed 3) Documents by category, year, MAJCOM, title, and number
AFMC/STR	X
HQ AFFSA/ XRR	ATCALS Database Published in October
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	Awareness of any AF-wide rqmts processing automation initiatives?	If yes, are your procedures compatible?
AFSOC/DORX	Unknown	Unknown
AFOTEC	No	
AFSPC	lots out there; none appear formalized	Unknown
AIA	X	X
AMC	Yes	Uncertain
HQ ACC/DR	X	X
AFMC/DRX	Requirements tools initiatives being headed by HQ USAF/XORD	Unknown, HQ USAF initiative still being defined.
AFMC/STR	X	X
HQ AFFSA/ XRR	No	Unknown
SAF/AQSM	X	X
AF/XOR	X	X
AF/LGMM	X	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	Customers
AFSOC/DORX	AFSOC - gained units
AFOTEC	The entire AF community and Joint programs.
AFSPC	AF AFSPC/OU, Wings
AIA	X
AMC	Other HQ AMC directories, various Action officers and Reserve forces
HQ ACC/DR	X
AFMC/DRX	All MAJCOMS, Product Centers, Air Logistics Centers and HQ AFMC offices.
AFMC/STR	X
HQ AFFSA/ XRR	Pilots, Air traffic controllers, FAA personnel, and Acquisition personnel as ESC/TG.
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	Products Delivered
AFSOC/DORX	MNS, ORD, C-MNS and supporting staff documentation
AFOTEC	Comments
AFSPC	MNS/ORDS/
AIA	X
AMC	APL and MOD Summaries
HQ ACC/DR	X
AFMC/DRX	Document review, comments, and coordination. Document distribution. Procedural and Policy guidance.
AFMC/STR	X
HQ AFFSA/ XRR	MNS, ORD, MAA, AOA, COIAS, Site surveys, and ATC faculty distance
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	How do you distribute appropriate requirements data to customers?
AFSOC/DORX	Handled by AO, preferably via electronic means (computer)
AFOTEC	N/A
AFSPC	Paper copy/ some electronic
AIA	X
AMC	Respond to Ad Hoc requests
HQ ACC/DR	X
AFMC/DRX	Electronically and manually via hard copy
AFMC/STR	X
HQ AFFSA/ XRR	Regular mail and some E-mail
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	What are your present challenges to producing/distributing your deliverables in terms of:
AFSOC/DORX	Manpower restrictions that limit our capability to take a document from concept to completion organically
AFOTEC	None
AFSPC	All are major factors in developing deficiencies info solutions. Management of resources to meet an extended time line is key factor.
AIA	X
AMC	All Current challenges due to lack of communications between action officers and inadequate data linkage to cost, scheduling, and performance actions
HQ ACC/DR	X
AFMC/DRX	All current challenges due to a lack of up-to-date hardware/software and communications tools, as well as a lack of manpower.
AFMC/STR	The ability to see deficiencies without technologies, identify deficiencies that are in trouble if technology is pulled and what happens if a concept is killed.
HQ AFFSA/ XRR	Many of the challenges are due to the lack of understanding concerning the requirements by various review offices that are involved in the MNS/ORD process
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	What experience do the people performing the requirements processing tasks need?
AFSOC/DORX	A minimal amount of hands on time using the database and a working knowledge of AF staff procedures
AFOTEC	Test Manager experience
AFSPC	AFSPC provides a training program to include S4/S111, command management seminar, etc. to give basic information
AIA	X
AMC	We have experience levels ranging from virtually none to extensive, obviously the more the better.
HQ ACC/DR	X
AFMC/DRX	A knowledge of current processes, existing requirements guidance, and understanding of organizational functions and interrelationships as well as a familiarity with computer hardware/software tools and a good set of communications tools.
AFMC/STR	X
HQ AFFSA/ XRR	Field experience in mission area, some acquisition training (ACQ 101) - MNS/ORD (Sys 111)
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	What are the estimated resources required to complete these tasks (in terms of processing a single "average" requirement)?
AFSOC/DORX	A flexible database and the computers to host it, and the time and patience to use it.
AFOTEC	8 M
AFSPC	Not tracked; End-to-end process involving multiple 2 LTR organization (???)
AIA	X
AMC	Unknown
HQ ACC/DR	X
AFMC/DRX	No data.
AFMC/STR	X
HQ AFFSA/ XRR	unknown
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

X denotes information not provided

ORGANIZATION PROCEDURE SUMMARY

	Does your organization have any plans in the near future to change your current requirements mgmt processes or the products you deliver?
AFSOC/DORX	Some acquisition reform measures have the potential for reducing our workload within AF system, the SOF system has no reform on the horizon.
AFOTEC	No
AFSPC	1) totally flow chart process to show input, output, supplier, customer, and internal process actions 2) Automate as best we can do
AIA	X
AMC	The systems requirement division is reorganizing to address new and maturing acquisitions, as well as deficiencies in training and quality processes.
HQ ACC/DR	X
AFMC/DRX	Any major changes within HQ AFMC will be driven by HQ USAF/XORD initiatives.
AFMC/STR	X
HQ AFFSA/ XRR	No
SAF/AQSM	X
AF/XOR	X
AF/LGMM	X

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